APPENDICES

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APPENDIX A -- EXAMPLE SURVEY FORM

Baltimore Bicycle Master Plan Survey

The City of Baltimore is undertaking a comprehensive bicycle master plan project. We want to know how we can make your trip safer and more convenient by bike. Please help us by answering the following questions. Return to: Bike Master Plan; 417 E Fayette St, 8th Floor; Baltimore, MD 21202.

1. Based on your experience, which Baltimore streets are best for bicycling? (Be as specific as possible about location, for example: Roland Ave, between Lake Ave and Northern Pkwy.)

2. Which Baltimore streets are worst for bicycling?

3. What are the best off-street routes (paved trails or sidewalks) in Baltimore?

4. What are the worst off-street routes (paved trails or sidewalks) in Baltimore?

5. On which streets would you like to see bicycle lanes or other bicycle facilities?

6. At which locations would you like to see additional bicycle parking (racks or lockers) provided? (Provide a neighborhood, address, intersection or business name.)

7. What was the primary purpose of your last bicycle trip? (Please circle only ONE reason.)

a. travel to work
b. travel to school
c. personal business /errands
d. visit friend/social/entertainment
e. travel to metrorail / metrobus
f. travel to carpool / vanpool
g. rode for exercise/recreational activity
h. other (please explain)_____

8. Which of the following factors plays a role in whether or not you ride your bike to your destination? (Circle as many as apply.)

a. travel time
b. availability of bicycle parking
c. safety of travel route for bicyclists
d. traffic
e. costs of other travel modes
f. need for exercise
g. availability of showers/changing facilities
h. weather
i. hills
j. other (please explain)_____

9. When making a bicycle trip, which of the following do you prefer to use? (Circle only ONE)

a. On-street
b. Bike lanes
c. Sidewalks
d. Off-street paved trails

10. How many days during the last week did you use the following forms of transportation? (Check as many as apply.)

a. Bus _____days
b. Subway/Lightrail ____days
c. Bicycle_____days
d. Walk _____days
e. Drive _____days

11. Did you take your bike on the following modes of public transportation in the last week?

a. Lightrail ____yes____no
b. Bus____yes____no

12. If you have been involved in a crash while riding your bike in the City of Baltimore, please answer the following two questions.

12a. Please indicate who else was involved in the crash (Circle as many as apply.)

a. Motorist
b. Bicyclist
c. Pedestrian
d. Other cause (i.e. slippery surface, uneven pavement, etc.)

12b. On what type of facility did the crash occur?

a. Street
b. Sidewalk
c. Trail

13. Which of the following factors do you think would do the most to encourage bicycling in the City of Baltimore? (Circle only ONE.)

14. What is the closest street intersection to your home? (If you live outside the City of Baltimore, please indicate your jurisdiction.)

15. What is your age?

16. What is your gender?
a. ____M
b. ____F

Thank you for helping with the Baltimore Bike Plan!

If you want to be contacted for the public meetings related to the plan, please fill out this portion:
Name:_____
Address:_____
_____
E-Mail Address:_____
(WRITE NEATLY PLEASE!!)

APPENDIX B – ESTIMATED MILEAGE OF SELECT BICYCLE FACILITY TYPES

The Proposed Network totals approximately 417 miles (centerline miles).

- 111 miles – Tier 1
- 46 miles – Tier 2
- 58 miles – Tier 3
- 119 miles – Tier 4
- 83 miles – Tier 5

A preliminary facility type (85 percent confidence rate) was identified for a total of approximately 150 miles. An additional 90 plus miles of roadway was found to be generally suitable for shared use, or no better facility option was possible.

A total of 17 miles in Tiers 1-3 was not reviewed in sufficient depth to make a facility recommendation. Twelve miles were studied, however a clear facility recommendation could not be determined.

GIS Code	Tier 1 Mileage	Tier 1-5 Mileage	Facility Type	Design Concept/Rationale
2	**26.1**	**45.5**	Bike Lanes - Traditional	Space exists for two 4.5 – 5 ft bike lanes.
3	**38.5**	**54.7**	Sharrow	Continuity is needed; not enough space for bike lanes; emphasize road sharing.
4	**12.4**	**25.6**	One-Way Bike Lane	Single bike lane paired with bike lane on a parallel one-way street.
5	**2.2**	**5.7**	Contra Flow Section	Use signs or formal lane, may use sharrow in one or both directions.
6	**0.0**	**1.0**	Striped Shoulders	Less than bike lane width, curbless roadway.
7	**71.6**	**93.1**	Shared Roadway	No special treatment.
8	**2.4**	**3.5**	One Way Shared Road	One-way road, no special treatment.
9	**5.3**	**7.6**	Wide Outside Lanes	13-15 feet
10	**2.7**	**3.6**	Sidepath	Minimum 8’ in very low volume situations; 10-12’ recommended; minimum 2’ buffer to curb
11	**1.9**	**5.4**	Bike-on Sidewalk Pairs	Minimum 6’ sidewalks on each side; 8’

				recommended plus a tree lawn.
14	**0.0**	**4.1**	Median Path	Generally not a recommended facility types.
16	**0.0**	**0.3**	One Way Sidewalk	Used for route continuity where there is minimal bike or pedestrian volumes.
17	**0.0**	**0.3**	Shared Bike/Bus Lane	Bus or shuttle lanes or loading zones exist; no room for bike lane.
18	**1.4**	**2.0**	Shared Peak-Hour Restricted Parking Lane	Bikes use left or right side of peak-hour restricted parking lane.
19	**1.4**	**1.4**	Sharrow on One Side, Bike Lane on the Other Side	Hilly roads without sufficient room for two bike lanes.

APPENDIX C -- BIBLIOGRAPHY OF BICYCLE FACILITY DESIGN GUIDELINES

American Association of State Highway and Transportation Officials. “Guide for the Development of Bicycle Facilities.” Washington, D.C.: AASHTO, 1999.

U.S. Department of Transportation, Federal Highway Administration. “Manual on Uniform Traffic Control Devices.” Washington, D.C.: U.S. DOT, FHWA, 2003.

Maryland Department of Transportation, State Highway Administration. “Standard Sign Book.” Baltimore, MD.

Maryland Department of Transportation, State Highway Administration. “Maryland Supplement to the MUTCD,” Baltimore, MD. Expected in 2006.

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Virginia Department of Transportation. “Work Area Protection Manual.” Richmond, VA, 2005.

City of San Francisco Department of Parking and Traffic “Bicycle Plan Update: Supplemental Design Guidelines,” San Francisco, CA, September, 2003.

City of Chicago Department of Transportation, Bureau of Traffic “Bike Lane Design Guide.” Chicago, IL, 2002.

Wisconsin Department of Transportation, “Wisconsin Bicycle Facility Design Handbook,” January 2004.

Philadelphia Department of Transportation, “Philadelphia Bicycle Facility Design Guidelines,” 1999.

District of Columbia Department of Transportation, Bicycle Facility Design Guide,” January 2006.

US Department of Transportation (FHWA) and ITE “Traffic Calming: State of the Practice,” Reid Ewing, August 1999.

Institute of Transportation Engineers, “Innovative Bicycle Treatments: and Informational Report,” May 2002.

Appendix D – Intersections Where Bicycle Safety Improvements are Needed

The intersections of the following streets in the Introductory Network are locations in need of special consideration and treatments to provide greater safety to bicyclists.

Street 1	**Street 2**	**Street 3**	**Street 4**
Greenspring Ave	Cross Country Blvd		
Greenspring Ave	Belvedere	Northern Pkwy	
Woodbourne	Belvedere	Perring Pkwy	
McClean	Hamilton		
Walther	Northern Parkway		
Old York Road	Argonne		
Walther	Harford		
33rd	Perring	Curran	
St. Paul	University Parkway	Greenway	
Art Museum Drive	Charles Street	San Martin Drive	Maryland
Druid Park Lake Drive	Eutaw	Madison	
Perring	Pentwood		
Harford	Curran Drive		
Gwynns Falls Parkway	Swan Drive		
Mondawmin Mall	Liberty Heights Road	Gwynns Falls Parkway	Reisterstown Road
Druid Park Drive	Reisterstown Road	Park Heights Ave	
Garrison Blvd	Gwynns Falls Parkway		
Garrison	Windsor Mill Road		
Edmondson	Hilton Parkway		
Eutaw	North Ave		
Guilford	North Ave		
Guilford	Eager	Read	
25th	Bonaparte		
Penn Station			
State Center			
Charles Street	Monument Street	Washington Monument	
Lexington	MLK Blvd		
Lexington	Eutaw	Paca	
Belair	Sinclair		
Edison	Sinclair		
Street 1	**Street 2**	**Street 3**	**Street 4**

Sinclair	Parkside Drive		
Moravia Park Drive	Pulaski Highway		
Eastern Ave	Dundalk		
Eastern Ave	Mason Lord Drive		
Eastern Ave Underpass			
President	Fleet	Aliceanna	
Redwood	Charles		
Washington	Camden		
MLK	Russell	Washington	
Russell	Hamburg		
Hamburg	Sharp		
Warner	Ostend		
Bayard	Bush	Ridgley	Russell
Bayard	Washington		
Frederick	Bridge over Gwynns Falls Trail		
Frederick	Hilton Parkway		
Baltimore	Ellicott		
Hanover	Wells	Cromwell	
Key Highway	Covington	Battery	
Boston	Aliceanna		
Potee	Hanover	Reedbird	
Potee	Hanover	Frankfurst	
Patapsco	Curtis	Pennington	

APPENDIX E – PROPOSED CONNECTORS

ID	Location/Name	Facility Type	Existing Facility (1) Needed Facility (0)	Tier	Action Needed
11	Ashland St Connector	Path	1	0	None
23	Carrollton Overpass	Overpass	1	0	None
25	Chase St Connector	Path	1	0	None
63	Evesham Playlot Overpass	Overpass	1	0	None
171	Stricker St Overpass	Overpass	1	0	None
47	Druid Hill Pk Connector	Path	0	1	Construct
75	Hopkins Plaza Cut Thru	Ramp or Stair Retrofit	0	1	Construct
87	James St Connector	Path	0	1	Construct
89	Kenwood Connector	Path	0	1	Construct
93	Lakewood Connector	Ramp	0	1	Construct
94	Lakewood Connector	Path	0	1	Construct
101	Lexington Connector	Sidewalk & Xing	0	1	Construct
111	Hopkins Plaza Cut Thru	Ramps or Stair Retrofit	0	1	Construct
136	Park Coonnector	Bike Xings	0	1	Construct
140	Parkside Dr Connector	Path	0	1	Construct
142	Patterson Park Connector	Path	0	1	Construct
157	Pratt St Sidewalk Bike R	Sidewalk	0	1	Construct
165	St. Paul Connector	Sidewalk/Curb Ramp	0	1	Construct
182	Wayman Park Dr Connect	Xing, Curb ramp	0	1	Construct
190	Druid Hill Pk Connector	Path	0	1	Construct
195	Druid Hill Pk Connector	Path	0	1	Construct
197	W Balt Marc Stn	Median Sidewalk	0	1	Construct
207	Inner Harbor Promenade	Waterfront Promenade	0	1	Construct
10	Aliceanna Connector	Sidewalk	1	1	Designate
17	Camden Yd Connector	Path	1	1	Designate
18	Camden Yd Connector	Sidepath	1	1	Designate
19	Camden Yd Connector	Sidepath	1	1	Designate
34	Conway Connector	Sidewalk	1	1	Designate
55	Eastern Ave Connector	Path	1	1	Designate
59	Eutaw St Connector	Bike Access to Prom.	1	1	Designate
73	Hopkins Plaza Cut Thru	Sidewalk	1	1	Designate
74	Hopkins Plaza Cut Thru	Sidewalk	1	1	Designate
76	Pratt St Sidewalk Bike R	Sidewalk	1	1	Designate
82	Inner Harbor Connector	Promenade & Sidewalk	1	1	Designate
86	James St Connector	Sidewalk	1	1	Designate
112	MLK Connector	Sidewalk	1	1	Designate
113	MLK Connector	Sidewalk	1	1	Designate
114	MLK Connector	Sidewalk	1	1	Designate
115	MLK Connector	Sidewalk	1	1	Designate

125	North Ave Connector	Sidewalk	1	1	Designate
131	Notre Dame Connector	Parking Access Rd	1	1	Designate
138	Park St Connector	Sidewalk	1	1	Designate
158	Preston Connector	Crossing & Path	1	1	Designate
166	Stadium Connector	Sidewalk	1	1	Designate
167	Stadium Connector	Sidewalk	1	1	Designate
176	W Balt Marc Stn	Sidewalk	1	1	Designate
177	W Balt Marc Stn	Sidewalk	1	1	Designate
178	W Balt Marc Stn	Sidewalk	1	1	Designate
179	W Balt Marc Stn	Sidewalk	1	1	Designate
180	W Balt Marc Stn	Sidewalk	1	1	Designate
193	Eutaw Connector Camden Y	Bike Access to Prom.	1	1	Designate
194	Water St. Connector	Sidewalk	1	1	Designate
198	Inner Harbor Promenade	Waterfront Promenade	1	1	Designate
199	Inner Harbor Promenade	Waterfront Promenade	1	1	Designate
201	Inner Harbor Promenade	Waterfront Promenade	1	1	Designate
202	Inner Harbor Promenade	Waterfront Promenade	1	1	Designate
203	Inner Harbor Promenade	Waterfront Promenade	1	1	Designate
204	Inner Harbor Promenade	Waterfront Promenade	1	1	Designate
205	Inner Harbor Promenade	Waterfront Promenade	1	1	Designate
206	Inner Harbor Promenade	Waterfront Promenade	1	1	Designate
24	Cathedral Sidepath	Sidewalk	1	1	Improve
49	Druid Hill Pk Connector	Path	1	1	Improve
53	Eastern Ave Connector	Sidewalk & Underpass	1	1	Improve
54	Eastern Ave Connector	Sidewalk & Underpass	1	1	Improve
56	Eastern Ave. Connector	Sidewalk & Underpass	1	1	Improve
64	Fawn St Connector	Promenade & Median Xing	1	1	Improve
66	Guilford Connector	Path	1	1	Improve
77	Hylton Pkwy Sidepath	Sidepath	1	1	Improve
78	Hylton Pkwy Sidepath	Sidepath	1	1	Improve
96	Leadenhall Connector	Path	1	1	Improve
97	Leadenhall Connector	Path	1	1	Improve
100	Lexington Connector	Xing	1	1	Improve
102	Lexington Connector	Path & Xing	1	1	Improve
103	Lexington Connector	Sidewalk & Xing	1	1	Improve
104	Lexington Connector	Xing	1	1	Improve
105	Light Rail Connector	Sidewalk	1	1	Improve
106	Linden Connector	Crossing	1	1	Improve
107	Linden Connector	Crossing	1	1	Improve
117	Maryland Ave Connector	Sidewalk & Xing	1	1	Improve
124	Mt Washinton Connector	Sidewalk and Bridge	1	1	Improve
139	Park St Connector	Sidewalk	1	1	Improve
143	Patterson Park Connector	Path	1	1	Improve
144	Patterson Park Connector	Path	1	1	Improve
145	Patterson Park Connector	Path	1	1	Improve
146	Patterson Park Connector	Path	1	1	Improve
147	Patterson Park Connector	Path	1	1	Improve
12	Baltimore St Connector	Path	1	1	None

13	Baltimore St. Connector	Path	1	1	None
15	Bank St Connector	Park Road	1	1	None
16	Bank St. Connector	Sidewalk & Xing	1	1	None
33	Cold Spring LRT Access	Ramp	1	1	None
44	Druid Hill Park Path	Path	1	1	None
52	Druid Lake Ring Road	Closed Park Road	1	1	None
91	Lake Drive Trail	Path	1	1	None
92	Lake Drive Trail	Path	1	1	None
116	MLK Xing	At Grade Crossing	1	1	None
135	Paca St Connector	Sidewalk	1	1	None
149	Patterson Park Connector	Path	1	1	None
208	Inner Harbor Promenade	Waterfront Promenade	1	1	None
36	Druid Pk Lk Dr Ctr	Sidepath	0	2	Construct
85	Inner Harbor Promenade	Promenade	0	2	Construct
90	Key Hwy Connector	Path	0	2	Construct
137	Park St Connector	Path	0	2	Construct
26	Chesterfield Connector	Path	0	3	Construct
27	Chesterfield Connector	Path	0	3	Construct
29	Clover Lane Connector	Sidepath	0	3	Construct
31	Cold Spr Stn Connector	At Grade RR Xing	0	3	Construct
32	Cold Spring Connector	Sidepath, Bridge & Xing	0	3	Construct
39	Druid Hill Park Overpass	Overpass	0	3	Construct
40	Druid Hill Park Path	Path & Crossing	0	3	Construct
45	Druid Hill Park Path	Path	0	3	Construct
48	Druid Hill Pk Connector	Sidepath	0	3	Construct
50	Druid Hill Pk Connector	Sidepath	0	3	Construct
51	Druid Hill Xing	Crossing Imp.	0	3	Construct
57	Erdman Xing	Path	0	3	Construct
58	Erdman Xing	Path	0	3	Construct
60	Evesham Connector	Path	0	3	Construct
61	Evesham Connector	Path	0	3	Construct
62	Evesham Connector	Path	0	3	Construct
65	Federal Hill Pk Ctr	Path	0	3	Construct
69	Herring Run Connector	Bridge & Path	0	3	Construct
98	Lee Park Connector	Path & Xing	0	3	Construct
99	Lee Park Connector	Path	0	3	Construct
119	Memorial Stadium Connect	Path	0	3	Construct
120	Memorial Stadium Connect	Path	0	3	Construct
121	Middle Br Tr Connecor	Path	0	3	Construct
122	Middle Br Tr Connector	Path	0	3	Construct
123	Montebello Connector	Path	0	3	Construct
126	North Ave Sidepath	Sidepath	0	3	Construct
127	North Ave Sidepath	Sidepath	0	3	Construct
128	Northern Pkwy Connector	Path	0	3	Construct
129	Northern Pkwy Connector	Path	0	3	Construct
132	Notre Dame Connector	Path	0	3	Construct
134	Ostend St Connector	At Grade RR Crossing	0	3	Construct
141	Parkside Dr Connector	Path	0	3	Construct

152	Patterson Park Connector	Path	0	3	Construct
153	Powder Mill Pk Connector	Path	0	3	Construct
155	Power Line ROW	Path	0	3	Construct
156	Power Line ROW	Path	0	3	Construct
159	Reisterstown Stn Conn	Path	0	3	Construct
160	Reisterstown Stn. Conn	Path	0	3	Construct
161	Resevoir Connector	Path	0	3	Construct
164	Chesterfield Connector	Path	0	3	Construct
169	Stockholm St Connector	Trail with Rail	0	3	Construct
174	Towanda Connector	Path	0	3	Construct
175	Towanda Connector	Path	0	3	Construct
183	Western Run Connector	Path	0	3	Construct
185	Western Run Connector	Path & Bridge	0	3	Construct
186	Wilmarco Connector	Path	0	3	Construct
187	Wyman Pk Dr Connector	Path	0	3	Construct
189	Balt Com College Connect	RR Xing	0	3	Construct
192	Coppin St Connector	Path	0	3	Construct
196	W Balt Marc Stn	Midblock Crossing	0	3	Construct
1	28th St Overpass	Sidewalk/Overpass	1	3	Designate
3	29th St Overpass	Sidewalk/Overpass	1	3	Designate
5	29th St Overpass	Sidewalk/Overpass	1	3	Designate
6	29th St Overpass	Sidewalk/Overpass	1	3	Designate
7	29th St Overpass	Sidewalk/Overpass	1	3	Designate
8	29th St Overpass	Sidewalk/Overpass	1	3	Designate
9	29th St Overpass	Sidewalk/Overpass	1	3	Designate
30	Clover Lane Connector	Sidepath	1	3	Designate
184	Western Run Connector	Sidewalk	1	3	Designate
191	Coppin St Connector	Path	1	3	Designate
2	28th St Overpass	Overpass	1	3	Improve
4	29th St Overpass	Sidewalk/Overpass	1	3	Improve
20	Carroll Park Connector	Path	1	3	Improve
21	Carroll Park Connector	Path	1	3	Improve
35	Druid Pk Lk Dr Ctr	Sidepath	1	3	Improve
37	Druid Pk Lk Dr Ctr	Sidepath	1	3	Improve
38	Druid Pk Lk Dr Ctr	Sidepath	1	3	Improve
41	Druid Hill Park Path	Path	1	3	Improve
42	Druid Hill Park Path	Path	1	3	Improve
43	Druid Hill Park Path	Path	1	3	Improve
79	I-95 Overpass	Path and Ramp	1	3	Improve
80	I-95 Overpass	Overpass	1	3	Improve
81	I-95 Overpass	Overpass	1	3	Improve
148	Patterson Park Connector	Path	1	3	Improve
150	Patterson Park Connector	Path	1	3	Improve
151	Patterson Park Connector	Path	1	3	Improve
154	Power Line ROW	Path	1	3	Improve
163	Sharp St Connector	Path	1	3	Improve
170	Stricker St Connector	Paved Closed Street	1	3	Improve
173	Towanda Connector	Path	1	3	Improve

200	Inner Harbor Promenade	Waterfront Promenade	1	3	Improve
46	Druid Hill Park Road	Closed Park Road	1	4	Designate
14	Bank St Connector	Path & Overpass	0	5	Construct
22	Carroll Park Connector	Path	0	5	Construct
28	Chesterfield Connector	Path	0	5	Construct
83	Inner Harbor Promenade	Promenade	0	5	Construct
84	Inner Harbor Promenade	Promenade	0	5	Construct
88	Kane St Connector	Rail-Trail & Overpass	0	5	Construct
118	Masonville Cove Conn.	Path and Xing	0	5	Construct
172	Stricker/Carroll Pk Ctr	Path, At Grade RR Xing	0	5	Construct
181	W Frederick Connector	Sidepath	0	5	Construct
68	Herkimer St Connector	Path	0	6	?
168	Stafford St. Connector	Path	0	6	?
188	Hanover St Connector	Sidewalk	0	6	?

APPENDIX F – ADVANCED BICYCLE ACCOMMODATIONS FOR FUTURE CONSIDERATION

The following approaches to bicycle accommodations were proposed during the course of the plan. These approaches are generally used in communities with well-developed bicycle networks and high levels of bicycle use. A number of these ideas have been successfully implemented in European cities.

1. Bicycle Boulevards—These are created by using through neighborhood streets, which parallel busier arterials, as the designated bike route. These streets usually have less traffic, and are retrofitted to further calm traffic and give priority to bicycle travel through design and operational controls. A number of "side-street" routes are proposed in the Plan, however without recommendations for physical traffic calming and controls which is more costly and requires extensive coordination with local residents. However, these facilities may be quite applicable in future years as the network is more fully developed.
2. Use the Northern European model of creating bike lanes curb separated from the roadway as well as separated from sidewalk. This design approach is not applicable on streets with curbside parking, which is typical in Baltimore.
3. Brand of bike lanes by using special colors or symbols to treat the roadway surface between the white stripes. This approach may be very useful in the future, however it adds cost to facility implementation.
4. Provide self-service bicycle rentals where bicycles locked to special equipment that is located in public places can be released by use of a credit card, used and returned. A fee is charged. A uniform, mass-produced bicycle is typically offered. Theft or vandalism could be a problem with such systems. While successfully used in Europe, they have not yet been successfully piloted in the US.
5. Establish "Car-free Zones" in downtown areas, or other areas where bicycle and pedestrian use is high and needs to be encouraged.
6. Take a more aggressive approach to providing bicycle parking equipment and space by reducing motor vehicle parking and replacing it with bicycle parking. For example, replace 1 of every 100 motor vehicle parking spaces with bike parking.
7. Develop neighborhood bicycle routes.
8. Provide outdoor information kiosks with bike route maps at key places through out the city, or along a bike route. This is already being done along the Gwynns Falls Trail. Once a significant amount of the route system is in place, outdoor maps may be very helpful.

APPENDIX G -- LIST OF TRANSIT STATIONS: EXISTING FACILITIES AND PRELIMINARY NEEDS ASSESSMENT

During the planning process the MTA provided information about its bicycle parking facilities at rail stations. A count of the lockers and racks that are installed and usable at each station was not provided. Below is a list of the stations that have lockers, racks or both, as well as those stations that will likely need bicycle parking equipment in the near term.

In general, racks and lockers are most useful for the outlying transit stations, where the bicycle can be used to get between the station and home. However, with increasing numbers of people living in and near the heart of the city, and job locations that may require reverse commutes, some downtown stations should also provide bicycle parking. In addition to parking a number of transit stations need access improvements to make it easier to get to the station by bicycle.

Transit Station	Has Lockers	Has Racks	Needs Lockers or Racks	Needs Improved Access
Light Rail				
Mt. Washington		x	x	x
Cold Spring			x	x
Woodberry			x	x
North Ave.		x	x	x
Mt. Royal		x	x	x
Westport			x	
Cherry Hill		x	x	
Patapsco		x	x	
Metro				
Reisterstown Plaza	x	x		x
Rogers Ave	x	x		
West Cold Spring	x	x		x
Mondawmin	x		x	x
Penn North			x	
Upton			x	
State Center			x	
Shot Tower Marketplace			x	
J. Hopkins Med. Ctr.			x	
Marc				
Camden Stn.		x	x	x
Penn Stn.		x	x	x
West Baltimore Stn.			x	x

APPENDIX H – POTENTIAL TRAILS AND EXTENSIONS

- Western Run
- Catonsville Short Line (West of Caton Avenue): Frederick Ave to City Line
- Gwynns Falls Parkway (Gwynns Falls Trail offshoot): Clifton to Franklintown Road
- Wetheredsville Road (Gwynns Falls Trail offshoot): Windsor Mill Road to Pickwick Road
- Western Maryland Rail Trail: Liberty Heights Avenue (West of Mondawmin Mall) to Carver Vocational-Technical High School
- Clifton Park Connector: 25th Street and Harford Road to Erdman Avenue and Norman Avenue
- BGE Transmission Line Trail (East of Sinclair Lane and Cold Spring Lane): Bowleys Lane to City Line
- East Baltimore Rail Trail (N-S Trail, East of Haven Street): Monument Street to Boston Street
- Franklin and Mulberry Trails (West Baltimore): Fremont Avenue to Fulton Avenue
- Stoney Run
- Gwynns Falls Trail offshoots in Cherry Hill (East of Annapolis Road, West of Patapsco River) to Light Rail station, Cherry Hill Park and City Line
- Herring Run Trail – Northern extension to Lake Montebello, Morgan State University and City Line
- Herring Run Trail – Southern extension to Armistead Gardens, add bridge over street to connect Federal Street with Bowley's

APPENDIX I – SAFETY, EDUCATION AND ENCOURAGEMENT PROGRAM IDEAS

- Use the mass media (radio, tv, outdoor advertising) for a bicycle safety campaign.
- Create bumper stickers: “Share the Road, Hon,” or “Believe in Bicycling”
- Distribute existing bicycle safety brochures developed by MDOT
- Develop pollution reduction by biking brochure for distribution at DMV offices and emissions inspection stations.
- Develop a laminated card for bicyclists to give to drivers who don’t show respect.
- Provide sensitivity training to bus drivers about sharing the streets with bicyclists.
- Get question about bicycle laws and safe interaction on the state driver’s license test
- Coordinate educational efforts through the Hispanic Liaison Office to ensure that the Latino population is reached with bicycle safety messages.
- Ask the radio and TV traffic reporting organizations to include information useful to bicycle commuters.
- Establish a citizen/volunteer bike patrol to keep watch over city bike routes and trails.
- Educate the teachers in driving schools.
- Expand city rideshare program to include bicycling incentives and encouragement
- Develop incentive program for city employees who ride/walk/take public transit to work regularly
- Ensure that regular bicycle riding safety and skill classes are available at low cost.
- Safe Routes to School Program
- Outreach to all communities and faiths
- Make bike helmets “cool”
- Ravens/Orioles advertising encouraging people to ride
- Valet bike parking
- Use traffic reports for bicycle public service announcements
- Tax breaks for businesses where employees ride to work
- Live where you work campaign
- Bicycle rehab cooperative: reuse old bicycles, train youth in bicycle repair
- Create bicycle hotline, website, email exchange; include good and safe routes information, general safety information,
- In media campaigns, include economic and public health benefits of bicycling
- Driver retraining to share the road (beyond driver’s test question): signs, ad campaigns, etc.
- Mass public media education campaign on car/biking etiquette

APPENDIX J – MAPS

The following maps were created as a part of the master plan process. It was not possible to include these maps in the report, however they can be reviewed at the Department of Planning offices. Each map is poster size: 34” x 44”

Introductory Network
Full Route Network, by Priority Tier
Suggested Facility Types, by Priority Tier
Challenging Intersections
Proposed Connectors, by Priority Tier

APPENDIX K – INTRODUCTORY NETWORK INSTALLATION CAPITAL BUDGET REQUEST

FY 2007 – FY 2009	Total Budget:	$3,595,000

Year 1: Facility Improvements (Design and Construction)	Responsibility	Cost
Install Collegetown Bike Route and associated facilities, including signs and pavement markings. $85,000 from Federal CMAQ Funds, $175,000 from Transportation MVR or other Capital funds.	Transportation	*$175,000*
2 Major Improvements: Engineering and Design of accommodations in Hopkins and Charles Plaza; Redwood and Water Street re-configuration.	Transportation	*$60,000*
Small infrastructure improvements including bicycle parking, stormwater grate improvements, intersection improvements, midblock crossings, short paths, curb ramps, or stairway retrofits. (Budget includes E & D costs.)	Transportation	*$285,000*
On-call consultant to provide in-house design, engineering, planning and related services to the Traffic Engineering Division.	Transportation	*$100,000*
	Total Year 1 Cost	**$620,000**

Year 2: Facility Improvements (Design and Construction)	Responsibility	Cost
Install 90 additional miles of bicycle lanes, other pavement markings, and/or signed bike routes. ($15,000 per mile for est. 20 miles of street markings; $7,000 per mile for est. 40 miles of signed bike routes)	Transportation	*$1,020,000*
3 Major Improvements: Construction of accommodations in Hopkins and Charles Plaza, Redwood and Water Street re-configuration; Engineering and Design of accommodations for Hanover Street from Riverside to Bridge.	Transportation	*$330,000*
Small infrastructure improvements including bicycle parking, stormwater grate improvements, intersection improvements, midblock crossings, short paths, curb ramps, or stairway retrofits. (Budget includes E & D costs.)	Transportation	*$260,000*
On-Call consultant to provide in-house design, engineering, planning and related services to the Traffic Engineering Division.	Transportation	*$175,000*
	Total Year 2 Cost	**$1,785,000**

Year 3: Facility Improvements (Design and Construction)	Responsibility	Cost
Install 60 additional miles of bicycle lanes, other pavement markings. ($15,000 per mile for est. 10 miles of street markings; $7,000 per mile for est. 22 miles of signed bike routes)	Transportation	*$680,000*
2 Major Improvements: Construction of accommodations for Hanover Street from Riverside to Veterans Bridge.	Transportation	*$150,000*
Small infrastructure improvements needed to make routes continuous and safe, such as intersection improvements, midblock crossings, short paths, curb ramps, or stairway retrofits. (Budget includes E & D costs.)	Transportation	*$260,000*
On-Call consultant to provide in-house design, engineering, planning and related services to the Traffic Engineering Division.	Transportation	*$100,000*
	Total Year 3 Cost	**$1,190,000**